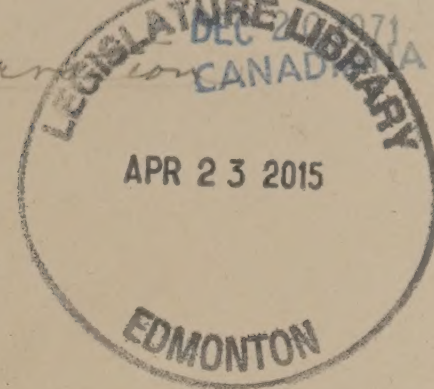


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3 (ENVIRONMENTAL MANAGEMENT

PRESENTED AT
THE ANNUAL TOP MANAGEMENT NIGHT
THE ADMINISTRATIVE MANAGEMENT SOCIETY
CALGARY CHAPTER

CALGARY INN, CALGARY, ALBERTA

MARCH 16, 1971

DR. WALTER R. TROST
CHAIRMAN



ENVIRONMENT CONSERVATION AUTHORITY

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MAN AND HIS ENVIRONMENT

1. HISTORICAL INTRODUCTION

1.1 More than 40 years ago

The way men think about their environment has undergone remarkable transformations in recent times, and not only in North America. If we recollect what things were like 400 and more years ago, 40 years ago, four years ago, and now, a simple enough picture emerges. For many centuries men were unconcerned about the effects they had on their surroundings. They lived in nature, as a natural part of it. As time passed individual farmers saw the advantages that good management produced in their own holdings. What might be called a classical conservationist view began to appear. Its essence was that an individual could, by adopting intelligent methods, preserve his own plot of land and protect his own interests by his own efforts. These attitudes slowly grew to include lands and forests and some other natural resources.

As an example, let me recall that 70 years ago in Canada, a Commission of Conservation was established, some of whose reports from 1908 to 1913 I have in my private library. The Honourable Clifford Sifton was Chairman, and Henry M. Tory, another good western name, was also a member. Dealing with "Forest Protection in Canada", the 1912 report recommends the suitability of the forests near Lesser Slave Lake for controlled development. It also recommends that, to prevent forest fires from sparks, the fuel in the trains should be changed to oil, which could be shipped in from California for 73¢ a barrel.

1.2 About 40 years ago

About 40 years ago the notion that men could stand alone and in any effective way guard their own environments independently of what other people were doing began to be more seriously tested. Here in the West this was signalled not only by the sociological and political after-effects of the economic slowdown associated with the Depression, but in a more direct way by the after-effects of that great onslaught on the Western environment, namely, grain farming in the Palliser Triangle. The drought helped, but the duststorms distributed the liberated topsoil without discrimination among those who broke the sod and those who didn't. Good farmers and bad went to the wall.

After the War a general and sustained apprehension about the kind of mismanagement that could lead to nuclear fallout, and the kind of mismanagement that was then called the population explosion, emphasized the feeling among people that, in environmental matters, they depended on each other more and more, and on themselves singly less and less. A broadly based and deeply felt public sensitivity to environmental problems, starting with pollution but steadily broadening out began to develop. The thrust of the concern and disquiet in the public was clearly that people could no longer individually protect their own interests in the environment, and that as a result the environment was being despoiled in a way dangerous to man. Though the need for restorative action seemed great and growing, individuals saw little that they themselves singly could do. Frustrations developed.

1.3 Four years ago

Those who were not frustrated took more explicit action. Some wrote books, logical appeals to the reason of man, some emphasized as well the philosophy of conservation, and for those who are particularly interested in Western Canada I would strongly recommend the book by Grant MacEwan entitled "Entrusted to My Care", published in 1966. Others acted in such ways as seemed to be available.

It is important to emphasize that people were reacting to more than just physical destruction. There was throughout a strong undercurrent of morality, an emotional feeling for what proper human behaviour in the environment should be. Indeed, Canadian Council of Churches is one group which feels strongly about man's behaviour in his environment and has organized programs that relate this behaviour to responsibilities that are somewhat more than merely temporal, or of his own life span.

Characteristically, there has been a spontaneous emergence of groups and associations pointing out and proclaiming the danger to which mankind as a whole is being exposed. These groups strongly and repeatedly call upon governments at all levels to take immediate action to protect the environment, call on industries and institutions and corporations to look to the effects that their actions have on the environment, and point out, sometimes most strongly, the dangers that lie ahead for mankind on what is often called Spaceship Earth, unless suitable actions are taken. Indeed, many responsible people have thought and still think that it is perhaps already too late for remedial action.

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1.4 Now

Our attitudes to the environment have changed in the past. My own feeling is that we are now, as a society, in the very midst of yet another change. Is not society right now in the process of accepting the environmental challenge the last four years have defined? Since individuals have become frustrated acting alone, the essence of the challenge is for action by groups, by industry, by institutions, by governments at all levels. The challenge is that society as a whole must now so act as to achieve the desired environmental objectives.

1.4.1 Objectives

The objective of course is a simple one. It is to restore and maintain an environment best suited to man and other forms of life now and for the future. And do we not now generally agree that there is a need in Canada for the development of policies for the management of the environment, taking into account the dynamics of life, the requirements of man and the resources available?

1.4.2 Roles and Functions

It is important I think to emphasize that very much of the initiative and momentum towards environmental management has come and is coming from individuals and groups of concerned citizens that have risen spontaneously out of the public body. The challenge and the problem proposed by these groups has, I suggest, now largely been accepted by society. Political parties everywhere, governments at all levels and in all countries, many corporations, institutions and industries are now seeking to establish and work out the roles each should fulfill as society begins to grapple with its environment. There is also the questions as to how these should dovetail with each other.

In a general way it might be said that the function of government is to create policies and the system of regulations within which the environment is to be managed. Clearly, it is also up to individuals and groups in the public at large to continue to investigate, report on, and press for such environmental reforms and environmental objectives as they feel to be in the public benefit. It is up to the politicians and the political parties to continue in dialogue with the public to determine the public's wishes in these matters of great interest to us all. It is up to industries, institutions and corporations to do the environmental management that relates to their own processes and programs. It is up to the departments and agencies of government to enforce the regulations that have been established by common consent. The Environment Conservation Authority was established to help this complex and important process to be achieved in Alberta.

2. THE ENVIRONMENT CONSERVATION AUTHORITY

The Environment Conservation Act, which is the legislation that created the Environment Conservation Authority, was passed in April, 1970. The Authority, which has temporary offices at 615 Devonian Building in Edmonton, has been active since January 1st, 1971, with the appointments of Mr. Paul Babey and Dr. Stuart Smith who joined me as Members of the three-man Board. The Authority has also opened an office in Calgary at 1002 Bowlen Building, which is in the process of being staffed.

2.1 Roles and Functions of the Authority

As set out in the Act, the Authority makes its recommendations and reports to the Lieutenant Governor in Council. These reports and recommendations are then laid before the Legislative Assembly, thereby becoming public documents. The Authority is to relate to the public at large, to the departments and agencies of government, and to the Cabinet. It is to relate to these three sectors in respect of environment conservation, which is defined in the Act to include such broad areas as resource management, conservation and pollution.

The Authority is to be a non-partisan body without vested interests, at one length removed from government itself. It is to conduct a continuing review of policies and programs of the Government and government agencies on environmental matters, assist in coordinating policies and programs relating to the environment within the departments and agencies of government, and undertake specific enquiries at the request of the Cabinet. As well, the Authority may, on its own initiative, or upon representations from the public, enquire into any matter pertaining to environment conservation, and receive appeals, petitions and complaints from individuals, industries or groups.

2.2 Relationship to the Public

The Authority will seek cooperation from the public and will use its access to government departments and agencies to help it perform these functions.

In relating to the public the Environment Conservation Authority will establish a Public Advisory Committee on the Environment with representation from concerned individuals and groups, from professional associations, from research and educational institutions, from industry, from labour, from Chambers of Commerce, from Agriculture, from the urban and rural municipalities, and such other sectors of the public as may wish to express views or have expertise on the environment.

The Authority will also hold Public Hearings and encourage the presentations of briefs and opinions from informed or concerned groups of individuals to develop all aspects of environmental matters it has under consideration.

It will also attempt to develop direct liaison and contacts with interested individuals and groups, and qualified experts here and elsewhere, both on a voluntary and on a consultancy basis.

2.3 Relationship to Departments and Agencies

In respect to the departments of government, the Authority can, and I am quoting from the Act, "require any officers or employees of any department of the government or any government agency to provide information that, in the opinion of the Authority, is necessary for the purposes of enabling it to carry out its responsibilities."

2.4 Reports to Cabinet

Finally, in its third connection, the Authority makes its recommendations and reports to the Lieutenant Governor in Council. These reports and recommendations are thereafter made available to the public.

2.5 The Gathering Together

In a general way, therefore, the Authority is organized to receive inputs from the Government agencies and departments on the one hand and from the whole complex structure of the public at large on the other. The output of the Authority is recommendations and advice to the Cabinet, which are made public. The Authority hopes that in this way it can develop a sensitivity to the environmental concerns that develop within the public at large, keep itself informed of the issues and arguments that continue to surround the problems of the environment, have systematic inputs from the expertise that exists in institutions, industries and in government agencies, be informed of the practicalities of regulatory mechanisms by departments of government, by industry and by labour with the hope that out of these inputs sensible recommendations in the public benefit will be made to Cabinet.

It is important to clarify that the Authority is not itself a regulatory body. It is concerned that good regulations exist, and that they are properly and justly enforced by others. Public hearings, public enquiries, appeals, and petitions from the public will be major activities of the Authority. In this sense its role is quasi-judicial, appellate, advisory. Since it also has an overview of and access to all arms of government in carrying out its duties, the phrase "Environmental Ombudsman" has also been used to describe part of its function.

In this way, the Authority may perhaps be thought of as a device through which the interests of the public are blended with the environmental, regulatory and legislative expertise inside and outside government so as to enable balanced and hopefully wise recommendations to be laid before Cabinet.

3. PROGRAMS, PROJECTS AND PRIORITIES

The Authority is now at work on five specific projects, three on request from the public and two on request from the Cabinet. The Authority has also developed some feeling for priorities it might itself attach to projects of a more general nature relating to the environment.

3.1 Petitions from the Public

Because of petitions from the public, the Authority has studies underway relating to wilderness areas in North West Alberta, to the restoration of lake systems and recreational areas in Central Alberta, and to the establishment of ecological reserves and environmental research areas in the Province.

3.2 Assignments from the Premier

It is also evident that matters of fundamental importance in Alberta are the impact of resource development on the environment and certain relationships between agriculture and the environment. It is most appropriate therefore that the Premier has asked the Authority to consider the impact on the environment of oil, gas, coal and forestry resource developments, with particular attention to surface reclamation and watershed conservation.

The Premier has also requested the services of the Authority in respect of the expanding Federal and Provincial policies and programs involving the use of chemical compounds, such as pesticides and herbicides, etc., which present a threat of serious long-term environmental consequences. These several projects are now in motion.

3.3 Authority Priorities

The Authority also places high priority on:

1. The establishment of a Public Advisory Committee on the Environment
2. The preparation of an Environmental Census of the Province
3. The development of suitable environmental educational programs inside and outside the school systems.

The Authority also believes that certain areas that require continuous as well as long range consideration might now helpfully be identified. These include:

1. The Environmental Problems of the Cities
2. Water Resource Management
3. Environmental Management in the Boreal Forest Areas of the Province

It would be logical, in cooperation with the Public Advisory Committee on the Environment, to undertake first the construction of an environmental census for the Province. The census would serve as a bench mark for future studies and indicate trends and problems in respect of the environment in Alberta.

4. AN ENVIRONMENTAL CENSUS OF ALBERTA

When we begin to tackle the problems of the environment, we must be sure that we are looking at our own. It doesn't do to imagine that Alberta is California, or Florida, or Switzerland, even though these are nice places too. We can't solve our problems by taking answers off the shelves of other countries. We must study our own province, tackle its most important problems first and those we can do the most about. Let us look for a moment at our own Province.

4.1 The Prairies and the Mountains

I am sure that all of us who live here admire the beauty Alberta provides, love its great diversity and the amplitude it offers in sky, in land and water to its citizens. Still, what are its salient characteristics? What is the environment in which we live? It brings together many sharp contrasts and extremes. First of all, the lovely rolling prairie lands move westward until they meet the sharp and rocky upthrust of the towering mountains, which are then included in our boundaries. These same treeless prairie plains moving northward are transformed, first into charming parklands, then into the boreal forests of the northern half of the Province, sometimes underlain by permafrost.

4.2 The Movement of People

Where the people are, or are going, is also important. And they are going into the cities. In the north, vast areas of our Province are habitable but are hardly inhabited at all. In the more arable southern half, improved land use practices have shifted population into the cities and larger towns. The population of the province is growing, but its distribution is also changing. Rural and urban problems are being created simultaneously but of opposite sorts: quick growth and mushrooming populations in the cities -- a slow and steady de-population in the rural areas.

4.3 The Economy

The economy of the Province also has its contrasts. A strong and broadly based primary resource industry is to be compared with an as yet relatively undeveloped secondary industry. Moreover, since the primary industries are based for the most part on either agricultural or energy resources it happens that we export almost everything we produce and in the relative absence of secondary industry import almost everything we consume. There is consequently not only a very considerable mobility in our population, there is also a characteristic and indeed in relative terms an extraordinary mobility of goods.

4.4 Land Use

There is similarly a sharp contrast in the uses to which land can be put, in the flat lands, in the mountains and in the foothills. Moreover, the great and immensely valuable energy resource deposits, (coal, oil, gas), lying at depth add still more to the competitive uses to which surfaces may be put. The horizontal layers and components superimpose and interact vertically, sometimes helpfully, sometimes not. In any event, they give structure to and outline the environment for resource development in the Province.

4.5 Water Management

Our position is also somewhat special in respect of water. For the most part we stand at the source of the great rivers that move through our Province from the mountains to the west and from the mountains to the north, rivers so huge that they pass through many provinces and territories emptying into distant seas beyond our boundaries. Only in the North do our rivers have their source outside our boundaries. These facts carry their own special responsibilities and challenges.

4.6 Climate

We also have ample air and sunshine. Sometimes so much air per second we can lean against it and not fall. The winds blow warm from the west and colder from the north. Inversion phenomena are common even in the summer. But in the winter when the warmer airs are aloft and the temperatures at ground level are very cold, water vapour from exhausts, from houses, from noses, from power plants and factories, instantly--almost explosively--transforms into tiny tough and round glassy particles of ice, that then are held just above the ground. Under 30⁰ below the city can almost disappear in its shroud of ice fog, or display flamboyant flairs and effluvia, while outside the city, or up above the inversion level the skies are blue. Carl Benson, from Alaska, states that "ice fog can be defined as 'low temperature air pollution'", and is unique enough, he suggests, to be classified as the fourth major type of air pollution. In Alaska, and in Edmonton, he might have been modest in putting it fourth, at least on some days.

4.7 The Northern Forests

Finally, the great, still relatively undeveloped area of the far northern half of the Province, magnificent and attractive in its own right, stands between the Laurentian Shield on the east and the Rockies on the west, marking out the single major access route up into the Mackenzie River sedimentary basin, into the Arctic and the High Arctic. In the further development of our nation both in terms of the Mid-Canada concept and through the North West Corridor to the Arctic, our own Province has, it seems to me, a fine piece of land to take care of.

5. LEGISLATION, MANAGEMENT AND EDUCATION

I have tried to say a word about how the attitude of society to its environment is changing. The period, long ago, when we were indifferent to the environment, and more recently the period of conservation within an agrarian economy have been followed by a period of acute individual frustrations and mass mismanagement of the environment. I do not believe that environmental problems stand apart from all the other problems and concerns of society. I do believe that society is now in the process of making new decisions about the environment. There are, I would suggest, three major steps involved, namely, in legislation, in management, and in education.

5.1 Legislation

New legislation is a basic requirement in setting new policies and establishing new goals. In a democracy, its appearance is also an indicator of public support. This year, much new legislation dealing with the environment is before elected representatives at all levels of government and in most countries. Last year, in Alberta, the Environment Conservation Act was passed. This year, the Department of the Environment Act, the Clean Water Act, the Clean Air Act, the Wilderness Areas Act, and the Environmental Research Trust Act have been proposed. Other provinces are also proposing new legislation. At Ottawa, a new Department of the Environment, The Canada Water Act, the Canada Air Act, are before the House. At Washington, the recently established Council on Environmental Quality preceded the creation of the still more recent Environment Protection Agency. And at the United Nations, an International Conference on the Human Environment is being organized for 1972 in Sweden. Moreover, all political parties support the notion of new environmental legislation though there may be argument about the kind and quality of it. It seems apparent that we are in the process of committing ourselves as a society to tackling the problem of environmental management.

5.2 Environmental Management

I would suggest to you that the task for the future is environmental management. In this task there are a large number of roles to fill. Many of them are clearly the direct responsibility of management itself, both in business and in government at all levels. In business as in society, two steps may be involved. First of all, that change in attitude which shows the task has been accepted. Secondly, the implementation of the programs that are required.

5.2.1 New Businesses

The addition of an environmental management attitude to the management of industry will certainly produce some changes. Many new businesses will be created. Some of these will be new in kind, developing new technologies or new relationships between people and things. Many will be inter-disciplinary, many highly specialized in areas not yet well developed. New businesses may be able to gain competitive advantages by introducing new processes that solve environmental problems in a superior way, and old established businesses may have to adapt, add new divisions, renovate as time passes.

5.2.2 Costs

In respect of the costs there are reasons to suspect that though they will certainly be real they may not, in percentage terms be overwhelmingly large. In the first place, good environmental management will prevent damages to people and to property that are now borne as hidden costs and do not appear as costs in the product itself. Secondly, the environmental management costs borne by industry will certainly somehow be passed on to the consumer where they will take their weight in the market place. Thirdly, in many cases, it is to be expected that good environmental management will in fact improve returns, as it has in so many cases already, by reducing wastage, by increasing the range and novelty of by-products, by developing superior technology, by improved efficiencies through suitable recycling processes and so on.

In any event, under sound environmental legislation the problem for industries will be straight forward. The competitive advantage will go to the industry with the best management, including the best environmental management, in accordance with the accepted principles of our society.

5.2.3 Population Growth

Just a word about population growth. Whether we are talking about our own or other species, this is clearly also an environmental management problem, perhaps on a world-wide basis our most fundamental one. However, it is by no means the responsibility of institutional managers alone.

5.2.4 A New Dimension

There is no doubt, however, that the addition of environmental management to management's responsibilities will add a new dimension to its outlook. Consideration will then have to be given by management to what the company looks like, what the company smells like, what the company sounds like, and how its processes and outputs affect the community and the world at large. Individual industries are already moving to accept this new challenge. As management begins to take on this new responsibility, a long complicated multi-level series of discussions and actions must be envisaged, embracing the public at large, industry and government at all levels. To protect the future of our species it may well be that society and industry are being compelled to take on a new order of complexity in their structure and in their relationship to the physical world, and that may be the task to which we are addressing ourselves.

5.3 Education

Finally, we come to education, both formal and informal. Its roles in introducing new attitudes, by transmitting general knowledge, developing special skills in people and generating new knowledge through research are all needed by society as it moves to accept the challenge of the environment.

5.3.1 Informal Education

There is no doubt that in the last few years the most effective education has been done by the informal educators, by associations with environmental orientation, by the anti-pollution groups and environmental activists, by the concerned groups and individuals who took it on themselves to carry the message to the people. We will need both formal and informal educators in the future.

5.3.2 Formal Education

The public schools could clearly invent programs and curriculum to help the young develop an awareness of the environment in contemporary terms, both as it applies to the complex communities and organisms called cities, and as it applies to the great outdoors. The latter may be less well known than the former to the young, so that special steps could perhaps be taken. Some work has already been begun in this direction. Greater changes may be needed in the public school system than at the post secondary level where environmental technicians and professional scientists and environmentally oriented programs have already been begun or can be introduced with less fuss. But they are needed.

Also important are continuing education programs for the young and the old, in the public at large and in industrial, institutional and governmental settings.

6. CONCLUSION

Let us hope that the proper blend of legislation, of education, and of environmental management can be worked out so that we can retain a high quality environment indefinitely into the future without unduly restricting the freedom of action of individuals in society. This can best be done, I would suggest, if each of us, including those in management, were to voluntarily and intelligently take up the challenge of the environment.

